



image

2818/3

PATENT
Atty. Dkt. AMAT/6392/DSM/LOW K/JW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Xia, et al.

Serial No.: 10/010,950

Confirmation No.: 5694

Filed: November 13, 2001

For: A Method of Depositing
Low K Barrier Layers

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Group Art Unit: 2818

Examiner: Dung Anh Le

CERTIFICATE OF MAILING
37 CFR 1.8

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

The Applicants, and the Attorney who signs below on the basis of the information supplied by the inventor and the information in his file, submit herewith patents, publications, or other information of which they are aware, which may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

While the information submitted in this Supplemental Information Disclosure Statement may be material pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication, or other information referred to therein is prior art for this invention unless specifically designated as such.

In accordance with 37 CFR § 1.97, this Supplemental Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other possibly material information as defined under 37 CFR § 1.56(a) exists.

11/12/2003 GWDRDDF1 00000112 200782 10010950

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The patents and/or publications submitted herewith are set forth on the attached Form PTO-1449.

The Commissioner is hereby authorized to charge the sum of \$180.00 due under 37 CFR § 1.17(p) pursuant to § 1.97, and any other fee necessary to make this submission timely, to the Deposit Account No.:20-0782/AMAT/6392/BKH.

Respectfully submitted,



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U.S. Department of Commerce, Patent and Trademark Office
(PTO Form 1449 modified)

Sheet 1 of 2 sheet(s)

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY
APPLICANT**

(Use several sheets if necessary)

Examiner Dung Anh Le



Docket No.
AMAT/6392/DSM/LO
W K/JW

Serial No.
10/010,950

Applicant
Xia, et al.

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Group
2818

U.S. Patent Documents

*Examiner Initial	Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
	A1 6,465,366	10/15/2002	Nemani, et al.	438	778	09/12/2000
	A2 5,926,740	07/20/1999	Forbes, et al.	438	763	10/27/1997
	A3 5,876,891	03/02/1999	Takimoto, et al.	430	71	05/26/1995
	A4 5,710,067	01/20/1998	Foote, et al.	437	238	06/07/1995
	A5 5,638,251	06/10/1997	Goel, et al.	361	313	10/03/1995
	A6 5,607,773	03/04/1997	Ahlburn, et al.	428	427	12/20/1994
	A7 5,494,712	02/27/1996	Hu, et al.	427	589	11/17/1997
	A8 5,465,680	11/14/1995	Loboda	117	84	07/01/1993
	A9 5,242,530	09/07/1993	Batey, et al.	156	613	08/05/1991
	A10 5,224,441	07/06/1993	Felts, et al.	118	718	09/27/1991
	A11 5,011,706	04/30/1991	Tarhay, et al.	427	39	04/12/1989
	A12 4,759,947	07/26/1988	Ishihara, et al.	427	38	10/04/1985
	A13 4,532,150	07/30/1985	Endo, et al.	427	39	12/22/1983

Foreign Patent Documents

*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation
	B1 09-008031	01/10/1997	JP	H01L	21/316	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	B2 00/19498	04/06/2000	WO	H01L	21/027	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	B3 1 176 226	01/30/2002	EP	C23C	16/32	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

OTHER ART

*Examiner Initial Including Author, Title, Date, Pertinent Pages, Etc.

C1 U.S. Patent Application No. 09/270,039, filed on March 16, 1999.

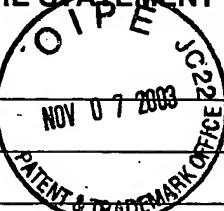
C2 Written Opinion from PCT/US99/22424, dated April 5, 2001.

C3 PCT Partial International Search Report for US99/22317 dated March 21, 2000.

Examiner

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/6392/DSM/LO W K/JW	Serial No. 10/010,950
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant Xia, et al.	Confirmation No.: 5694
(Use several sheets if necessary)		Filing Date November 13, 2001	Group 2818
	Examiner Dung Anh Le		

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
	A1	2003/0139035	07/24/2003	Yim, et al.	438	643	09/19/2002
	A2	2003/0129827	07/10/2003	Lee, et al.	438	629	07/15/2002
	A3	2003/0111730	06/19/2003	Takeda, et al.	257	758	05/28/2001
	A4	2003/0089988	05/15/2003	Matsuura	257	758	08/13/2002
	A5	2003/0003765	01/02/2003	Gibson, Jr. et al.	438	760	01/02/2002
	A6	2003/0001282	01/02/2003	Meynen, et al.	257	777	06/25/2002
	A7	2002/0111042	08/15/2002	Yau, et al.	438	789	11/15/2001
	A8	2002/0093075	07/15/2002	Gates, et al.	257	531	01/14/2002
	A9						
	A10						
	A11						

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C4	PCT International Search Report for US99/22425 dated February 11, 2000.
	C5	Dijkstra, et al. "Optimization of Anti-Reflection Layers for Deep UV Lithography", Proceeding of SPIE Optica/Laser Microlithography, Bellingham, SPIE, Volume 1674, (1992) Pages 362-375.
	C6	Omar, M.A. "Elementary Solid State Physics: Principles and Applications," Lowell Technological Institute, Addison-Wesley Publishing Company, 1975, Pages 124 & 125.
	C7	Fukuda, et al. "Highly Reliable SiOF Film Formation by ECR-CVD using SiF ₂ H ₂ ", (1996) Symposium on VLSI Technology Digest of Technical Papers, IEEE, Pages 114-115.
	C8	PCT International Search Report for US/02/40034, dated May 19, 2003.
	C9	Wu, et al, "Advanced Metal Barrier Free Cu Damascene Interconnects with PECVD Silicon Carbide Barriers for 90/65-nm BEOL Technology", 2002 IEEE Pages 595-598.

Examiner	Date Considered
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